

**ABSTRACT OF THE DISCLOSURE**

In a process for speed-resolved flow measurement during a movement cycle in magnetic resonance tomography, an overview image (localizer) of a selected region of a living subject is acquired using an MRT-device, the overview image (localizer) is displayed on a screen, a quasi-simultaneous acquisition of an anatomical image series of the selected region and of a speed-resolved image series of a region identified within the selected region during the movement cycle, are performed, the two image series are displayed on the screen, and when displaying the image series, each speed-resolved image of the speed-resolved image series is integrated in the time-corresponding anatomical image of the anatomical image series.

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